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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/579,596	05/26/2000	Lloyd F. Linder	PD-99W166	8433

7590

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EXAMINER

ODOM, CURTIS B

ART UNIT

PAPER NUMBER

2634

DATE MAILED: 01/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/579,596

Applicant(s)

LINDER ET AL.

Examiner

Curtis B. Odom

Art Unit

2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-9,11-13 and 15-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15 and 18 is/are allowed.
- 6) ☒ Claim(s) 1,3,8,9,16 and 17 is/are rejected.
- 7) ☒ Claim(s) 4-7 and 11-13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 May 2000 and 16 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Objections

1. Claim 17 is objected to because of the following informalities: The phrase “a mixer connected to the outputs of each intermediate-frequency filter for combining the signals output by each of said intermediate frequency-filter” is suggested to be changed to “a mixer connected to the outputs of each intermediate-frequency filter for combining the signals output by each of said intermediate frequency-filters”. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 17 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 17 recites the limitation “a mixer connected to the outputs of each intermediate-frequency filter for combining the signals output by each of said intermediate frequency-filter”. This limitation, specifically, a mixer connected to the output of the intermediate-filter, was not clearly described in the specification.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 3, 8, 9, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. (U.S. Patent No. 6, 483, 355) in view of Tomasz et al. (previously cited in Office Action 7/11/03).

Regarding claim 1, Lee et al. discloses a signal processing system comprising:

means for receiving (Fig. 4, block 405, column 3, lines 3-9) an incoming RF signal;

means for narrowing (Fig. 4, block 410, column 3, lines 23-38) the received incoming signal to a limited frequency band;

means for amplifying (Fig. 4, block 420, column 3, lines 23-38) the narrowed incoming signal;

means for rejecting (Fig. 4, block 425) an image of the narrowed incoming signal to output an input signal;

means for distributing (Fig. 4, block 460 and 465, column 3, lines 60-64) the input signal to one of two or more channels;

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means disposed in each of the channels for processing (Fig. 4, block 470, column 3, lines 63-66, wherein the filters are disposed in each channel as shown in Fig. 1) the distributed signal and providing an output signal therto, and

means for combining (column 3, line 64-column 4, line 2, DSP) the signals output by two or more processing means, wherein a DSP combines I and Q signals output from ADC's (see Tomasz et al., Fig. 3, block 78, column 4, lines 58-67).

Lee et al. does not disclose only one of the processing means is active at a time.

However, Tomasz et al. discloses means disposed in each of multiple channels for processing a distributed signal and providing an output signal thereto, wherein the operations of the processors can be controlled by an external source (Fig. 3, block 102, column 4, lines 22-36). Controlling the operations of the processor by an external source would allow the tuning as well as activation/deactivation of the processors. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made that since the processors of Lee et al. and Tomasz et al. are both filters, to modify the signal processing system of Lee et al. with the processors (filters) of Tomasz et al. which would allow for allow the tuning as well as activation/deactivation of the processors. This would allow the system to save power with the activation/deactivation of the processors and create greater adaptability in the system by allowing the tuning of the processors.

Regarding claim 3, which inherits the limitations of claim 1, Lee et al. discloses the distribution means includes a mixing circuit (Fig. 4, block 460 and 465, column 3, lines 60-64).

Regarding claim 8, which inherits the limitations of claim 3, Lee et al. discloses the mixing circuit further includes means for mixing the input signal with a mixing (PLL) signal (Fig. 4, block 460 and 465, column 3, lines 60-64).

Regarding claim 9, which inherits the limitations of claim 8, Lee et al. discloses the mixing circuit operates in a current mode (Fig. 4, block 460 and 465, column 3, lines 60-64), wherein the signal from the PLL is a current signal.

Regarding claim 16, the method included features corresponding to subject matter mentioned in the above rejection of claim 1 which is applicable hereto.

Allowable Subject Matter

6. Claims 15 and 18 are allowable over prior art because related references do not disclose a receiver which distributes a signal into multiple channels, each channel containing a Gilbert cell, automatic gain control, and transconductance amplifier.

7. Claims 4-7 and 11-13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Curtis B. Odom whose telephone number is 703-305-4097. The examiner can normally be reached on Monday- Friday, 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 703-305-4714. The fax phone numbers for the organization where this application or proceeding is assigned are 709-872-9306 for regular communications and 703-872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Curtis Odom
January 7, 2004


STEPHEN CHIN
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